

AMENDMENT TO THE SPECIFICATION

Please amend the specification as follows.

Please replace paragraph [04] with the following:

-- Proxy servers are deployed in data networks, in part, to reduce user response times. A proxy server, for example, may store information that is routinely accessed by a client (e.g., personal computer (PC)). Such a proxy server is referred to as a caching proxy server. In this manner, unnecessary traversal of various segments of a network to retrieve information that is requested by the client is avoided. Proxy servers have also been used, particularly in satellite communications networks and wireless networks, to reduce response time and network utilization by converting from the applications native protocol (e.g. HTTP) to a protocol which is optimized to operate over the satellite or wireless network. Such a protocol typically defeats the response time performance shortcomings of the native protocol and provides compression and other measures to reduce network utilization. Such an optimizing proxy server typically communicates with an upstream proxy server located at the far end of the satellite or wireless network. This upstream proxy server converts the optimized protocol back into the native protocol thereby allowing communications with unmodified servers on the conventional network. As is well known, a combination caching and optimizing proxy server may be used to provide the benefits of both the caching and optimizing proxy server. ~~Such a combination caching and optimizing proxy server is described in my TBD patent application which is incorporated into this application by reference.~~ Conventionally, to obtain the advantages of the proxy services, the client software requires modification to redirect the requests to the proxy server. --

Please replace paragraph [23] with the following:

-- The host 101 is loaded with a web browser (e.g., Microsoft Internet Explorer, Netscape Navigator) to access the web pages that are resident on a web server 105; collectively the web pages and the web server 105 denote a "web site." The host 101, in this example, is attached to a local area network (LAN) 107 and communicates over a wide area network (WAN) 109 through a router 111 (or equivalent network device). A proxy server 113 may be provided to increase system performance by supporting such functions as HyperText Transfer Protocol (HTTP) proxying and Domain Name Service (DNS)

proxying. When this proxy server 113 is an optimizing proxy server, it communicates with an upstream proxy server 114, which may be connected to the portion of the WAN ~~404~~ 109 near its ISP connection 115; alternatively, the upstream proxy server 114 may be attached to the Internet 103. --

Please replace paragraph [26] with the following:

-- The host 101's web browser may be configured to either access URLs directly from the web server 105 or from the proxy server 113, which acts as a HTTP proxy. As discussed above, a URL specifies an address of an "object" in the Internet 103 by explicitly indicating the method of accessing the resource. A representative format of a URL is as follows:
"http://www.hns.com/homepage/document.html." This example indicates that the file "document.html" is accessed using HTTP. The proxy server 113 acts as an intermediary between one or more browsers and many web servers (e.g., server 105). The web browser requests a URL from the proxy server 113 which in turn "gets" the URL from the addressed web server 105. The proxy server 113 itself may be configured to either access URLs directly from the web server 105 or from an upstream proxy server ~~443a~~ 114. When the browser is configured to access URLs via a proxy server 113, the browser does not need to do a DNS lookup of the URL's web server because it is requesting the URL from the proxy server and need only be able to contact the proxy server. The HTTP proxy server 113, according to one embodiment of the present invention, stores the most frequently accessed URLs. When the web server 105 delivers a URL to the proxy server 113, the web server 105 may deliver along with the URL an indication of whether the URL should not be cached and an indication of when the URL was last modified. --

Please replace paragraph [29] with the following:

-- FIG. 2 shows a diagram of an architecture for providing transparent proxying in a host computer, in accordance with an embodiment of the present invention. In this example, the transparent proxy services are implemented in a host 201, such as a personal computer (PC). The host 201 may operate in either a one-way satellite system or a two-way satellite system. In the one-way system, the downstream channel is over the satellite network, while the upstream channel (i.e., return channel) is provided over a terrestrial network (e.g., dial-up modem); however, the two-way system has both upstream and downstream channels over the satellite network. The host 201 couples to a satellite

modem ~~247~~ 219 via a communications interface ~~249~~ 217, which in an exemplary embodiment is a Universal Serial Bus (USB) interface. The transparent proxy services provide transparently routing of HTTP and DNS lookups. --